CAUSES OF THE CHANGES IN PRICES SINCE 1896

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PRICES SINCE 1896

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I.

The problem before us involves not only a statement of the facts in regard to prices since 1896, and an explanation of the changes —in this case a rise— in these prices, but also the whole theory of prices. At the beginning, moreover, certain ambiguities as to what is to be included in our examination should be cleared up. Obviously we must include in our study not only the changes in the prices of goods but those in the prices of securities. Therefore, as indicated in the accompanying outline, our discussion breaks into two parts, one treating of the prices of commodities, and the other of the prices of securities. Although, in the past, the causes of changes in the prices of goods and securities have been often assumed to be the same, a very casual reflection will show that they are widely different, as may be noted by the causes briefly presented in the outline. A full presentation of all the points raised by this outline would fill a volume; therefore, while the outline may serve as a map of the field, and of the relations of one point to another, it will also serve to indicate to those present the topics which have been passed over for lack of time, and those which have been chosen for examination. For my own part in this discussion, I have chosen to present a study only in Part I, that is, on changes in the prices of commodities; and in Part I, also, I shall attempt to treat of only some of the causes affecting the general level of prices, namely Part I, b, (1), The Increased Production of Gold, and Part I, b, (3), (4), and (5), The Influence of Monopolies, Extravagance, and Speculation. As regards other topics under Part I, it will save time and secure definiteness if the case is stated in the form of propositions without argument.

II.

First of all, this method will be especially useful in the presentation of the theory of prices, since it may be assumed that the members of this Association are familiar with the general monetary discussion. To my mind, the following propositions contain the essence of the theory of prices, on which the causes must be based. As everyone will appreciate, only general statements, without any limiting qualifications to speak of, can be given in so small a compass.

1. The price of a commodity is measured by the quantity of a given standard for which it will exchange.

2. A change of prices may be due to changes in the conditions affecting the supply (thus including expenses of production) of goods, as well as to changes in the demand for and supply of gold. A statistical statement of a change of price is not a statement of the cause of the change.

3. Probably there is not so much difference of opinion regarding the theory of prices as is sometimes supposed. Other causes being supposed constant, an increased supply of gold would tend to raise prices. No one can fail to see that, if by "money" is meant gold, a change in its quantity would, other things being equal, be a factor affecting prices. An increasing demand for gold, however, would work aginst the effect of an increasing supply. If the new demand offset the new supply, then, if changes of prices occurred, their cause must be sought in the influences touching the producing and marketing of goods.

4. The effective demand for goods (granting their utility) is limited by the buyer's purchasing power. This purchasing power is not identical with the quantity of the media of exchange in circulation, any more than the value of the total exchangeable wealth of the community is identical with the value of the total money in circulation.

5. The general level of prices is not independent of particular prices; since there can be no such thing as a general level, or average, of prices which is not the resultant of a number of particular prices each arrived at by individual buyers and sellers. The causes of price changes must be sought in the forces settling particular prices. This does not exclude the consideration of any causes affecting the value of the standard in which the prices of goods are expressed, because the standard is itself a particular commodity.

6. In particular cases, competitive prices in this country are arrived at by the higgling of the market, which depends on buyers' and sellers' judgment of the demand and supply of the commodity (*e. g.*, wheat); and, when the price is fixed, the credit medium by which the commodity is passed from seller to buyer comes easily and naturally into existence and, of course, for a sum exactly equaling the price agreed upon, multiplied by the number of units of goods. Price-making generally precedes the demand upon the media of exchange, and does not at all imply any necessary demand at the moment upon the standard in which the prices are expressed (cf. 10).

7. The offer of "money" for goods is only a resultant of price-making forces previously at work, and does not measure the demand for goods (cf. 6). That is, the quantity of the actual media of exchange thus brought into use is a result and not a cause of the price-making process. The supposed offer of money has no money as its basis, but is only the offer of a purchasing power, previously existing, based on saleable goods, which at the moment of payment appears expressed in terms of the standard. By credit devices the actual transfer of the standard is reduced to an inconsiderable minimum. In reality (as in foreign trade) goods are exchanged against goods.

8. The effect of credit on prices is to be found mainly in banking facilities by which goods are coined into means of payment, so that, expressed in terms of the standard gold, they may be exchanged against each other. Thus credit devices relieve the standard to an incredibly great degree from the demand for the use of gold as a medium of exchange, and thus remove a demand, as trade increases, which would otherwise have enormously affected the value of gold. Thus the effect of credit on the general level of prices in considerable periods of time is shown by a tendency to reduce the demand on the standard gold, and hence to prevent the tendency toward falling prices.

9. A general proposition is that banks are limited in making loans by the possession of capital, a bank of large capital and deposits being able to make large loans, a bank of small capital and deposits, small loans. A second proposition is that the demand for legitimate loans varies with the exchanges of goods and collateral and the opportunities for investment. With an increasing activity in business, however—either sound or speculative—the expansion of loans is limited by the resources of the bank. Next, a bank trying to carry a certain amount of loans, must hold a specified proportion of reserves to demand liabilities under the rule of banking experience or law. The amount of its capital and the funds left with it determine the relative size of its loan item; and the sum of its loans and resultant deposits determine the amount of its reserves. The reserves of a bank are thus a consequence of the loan operations. This conclusion, however, as it affects the practical problem of the present day, is not, in my opinion, invalidated by the conceivable cases arising, when business tends to outrun banking facilities, in which anything that makes increasing reserves possible would increase the

power of the banks to lend. When gold becomes increasingly abundant, the banks having large resources more easily get the gold reserves needed for their operations. It still remains true that the fact of an increased supply of gold does not of itself increase loans, unless conditions of business demand an increase in loans. Therefore, the expansion of busines is not a necessary consequence of an increasing supply of gold, any more than an expansion of railway traffic is the necessary consequence of an increasing supply of cars. If increasing goods are in existence to be transported, then, of course, there is an increasing demand for cars. Likewise, if there are more bank resources and loans, there is an increasing demand for that which is lawful reserve; from which it is claimed that the use of new gold in bank reserves, under present conditions, is not the significant causal force which expands business and raises prices (although it may be contemporary with it).

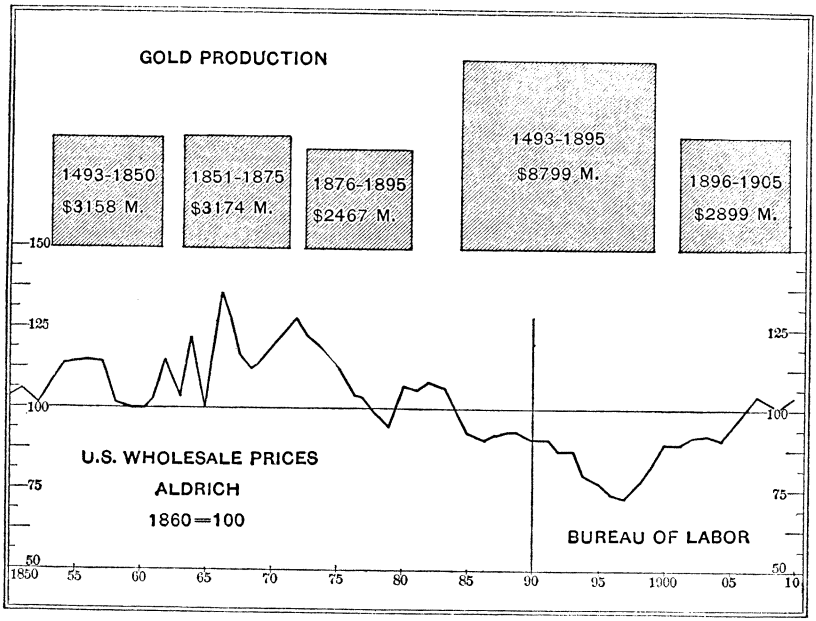
10. The problem of explaining the general level of prices is one of arriving at the adjustment between two terms of a ratio (the standard on the one side, and goods on the other), each of which is influenced by supply and demand. Gold being one, and goods being many, a cause working on gold alone, and important enough to show an appreciable effect, might explain a general movement of prices. In practical operation, however, because of the large existing stock of gold,very considerable additions may take place in the supply of gold without materially changing the world value of gold as related to goods in general. Rapid changes of prices are hence more likely to be due to influences in the market for goods, to speculative changes of demand for goods, or to psychological forces working independently of facts. (See the later discussion of fact.)

III

Part I, a

The facts[1] as to the movement of prices, from 1850 to 1909, in the United States, and the world production of gold in the corresponding years, by periods, are presented on the accompanying chart, so that direct comparisons are made possible. The single line represents the index number of the Falkner table of prices (in

[1] Cf. J. D. Magee, *Journal of Political Economy,* January 1910. For the annual production in detail see Mr. Magee's table.



the Aldrich Report), until 1890, to which is added the index number of the United States Bureau of Labor reduced to the base line of the former. The situation from 1850 to 1890 is included in order to give the historical means of comparing causes and effects for the same general groups of forces working in periods of both falling and rising prices. With these facts at hand we may now proceed to a study of the causes of the movement of prices.

IV

Part I, b, (1)

The facts[1] as to the production of gold are here summarized as follows:

SUMMARY OF PRODUCTION OF GOLD BY VALUE

Period	
1493-1850	$ 3,158,210,280
1851-1875	3,174,005,000
1876-1895	2,467,266,800
1896-1905	2,899,604,500
1493-1875	6,332,215,280
1851-1895	5,641,271,800
1493-1895	8,799,482,080
1493-1905	11,699,086,580

[1] Cf. J. D. Magee, *Journal of Political Economy*, January 1910. For the annual production in detail see Mr. Magee's table.

V

In the problem of discovering the causes of changes in the level of prices, it is necessary first to reach a conclusion as to those causes which operate on the gold standard in which our prices are expressed. By so doing we may locate the general level—so far as the standard is concerned—or the one thing which might work as a cause common to all goods. The relation between gold and goods might be illustrated by the familiar mechanical illustration: a rod balanced on a fulcrum, on one end of which works the forces affecting the value of gold, and on the other end the forces affecting the value of particular goods. The relation between goods and gold being a ratio, as one end of the rod goes up, the other necessarily goes down.

There are, as we all know, various forces at work to produce the resultant price level. We may here start from a proposition on which we can all agree. An increase in the quantity of the monetary standard in the world—such as gold—would tend, *other things being equal*, to lower its value and thus raise prices. In trying to find the causes in the price level at any given time (as in 1896-1909) it is necessary, therefore, after stating the facts as to the increase of gold, to examine into the influence of "the other things."

To begin, we may take up the demand for gold, which, of course, is both monetary and non-monetary. First as to the non-monetary uses, such as abrasion, shipwreck, and disappearance in the arts: The statistics of consumption in the arts are unsatisfactory; at the best they are only estimates. Although the total production of the world, 1493-1850, was $3,158,000,000, there is no evidence as to the available stock in 1850. My belief is that there was not more than $2,000,000,000.[2] In the period of 1851-1895, the production was $5,641,000,000, and the consumption in the arts, at the average rate of $50,000,000 a year requires a deduction of $2,250,000,000, which leaves $3,391,000,000. The arts in recent years are estimated to use more than $100,000,000.[3] In the period, 1896-1905, if $1,000,000,000 be deducted from the production of $2,899,000,000 we have $1,899,000,000. Thus the total available stock in 1905 would be about $7,690,000,000. The production of the last four

[2] There is a possible error here of perhaps $500,000,000.

[3] The estimate for 1908 is $113,996,000. Cf. U. S. Report of Director of Mint, 1909, p. 80.

years, 1906-1910, is about $1,600,000,000, or, less the consumption in the arts, about $1,200,000,000.

The monetary demand for gold, on the other hand, has shown certain definite characteristics. Whether it be prejudice, or enlightened business judgment, the commercial nations of the world have shown a persistent and continuing disposition to adopt a gold monetary system as soon as their own means, or the forthcoming supply of gold, has made it possible. The United States led in 1853, when we declined to change the ratio in order to bring silver into circulation when only gold was in use. From 1871-3, Germany, the countries of the Latin Union, Austria-Hungary, the United States (with the resumption in gold in 1879), and India (in 1893), in response to the preferences of the commercial world, placed themselves on the gold standard by legal enactments. The demand for gold all through this period was based upon considerations independent of the movement of prices. For this was a time of falling prices when much was heard of the appreciation of gold and the need of silver. In spite of this tendency toward falling prices, the movement toward the adoption of gold went on. Moreover, as may be seen by the chart, the on-coming supply of gold in the earlier period was very large in comparison with the existing stock (the percentage being much larger than in the period of 1896-1905). But it was precisely this large new supply of gold which enabled the commercial nations to gratify their desire for what they believed was a more stable standard.

As we enter the present period (1896-1909) we find this momentum towards the gold standard still in force; and other countries in emulation planned to put themselves on an equally stable standard with those whose means had permitted an earlier action—quite irrespective of the fact that this last was a period of rising prices, while the former was one of falling prices. In this period, Russia, Japan, various states in South America, such as Peru, Argentina, and Brazil, and recently Mexico, have emphasized the movement away from silver to gold. Moreover, as backward lands, like Turkey, parts of Asia, Egypt, and various districts of Africa, have developed their resources and increased their trade, they have taken on gold in their monetary systems. With increasing trade also there are more exchanges of goods; hence, even in countries (like Great Britain and the United States) that do not use gold to speak of, except in reserves, there are

increasing loans and deposits and thus a demand for more gold reserves. Consequently, in countries long ago established on the gold standard there will be a steadily increasing demand for gold as exchanges expand. We find thus a special characteristic of the demand for gold (certainly not existing in the demand for silver). The power of developing countries to soak up new gold is as marked a part of present conditions as is the power of a porous and sandy soil to soak up a heavy rainfall. We must, therefore, take full account of the noticeable fact that the recent demand for gold seems about to keep pace with the new supply; that a shipment of gold from the mines to London is today eagerly competed for, not only by European countries, but by Egypt, India, Turkey, Argentina, and Brazil.

Consequently it may be of interest to see which countries have taken the largest amounts of gold into their stocks since 1895:

United States	$ 994,000,000
Russia	427,000,000
Germany	419,000,000
South American States	213,000,000
British Empire	194,000,000
Austria-Hungary	163,000,000
Italy	160,000,000

Besides the demand for gold in the arts, and the apparent monetary demand, as thus already presented, we must not omit to take into account also the large stocks of gold held by banks and institutions which publish no statements. In the hands of large private institutions like those of the Rothschilds, Bleichroders, and others, great amounts of gold are carried. It is from such stores that the needs of states, such as Austria-Hungary, France, Italy, and even the United States (in Cleveland's administration), have been supplied without drawing down visible reserves.

Thus far, then, we have examined the one factor of demand for gold, among the "other things" (which were supposed to remain equal). There is abundant evidence to show that the demand for gold, in this recent period of rising prices (1896-1909) has been as strong as, or even stronger than, the demand for gold in the previous period (1873-1896) of falling prices.

VI

It looks very much as if we must seek for the causes of rising prices since 1896 in some of the "other things" not yet examined.

There is no time, however, for extended discussion on these points [such as Part I, b, 2), 3), 4), 5)].

In regard to Part I, b, 2) the effects of Tariffs and Taxation, Unionism and higher Wages, and changing Agricultural Conditions in increasing expenses of production in all industries are so patent as to require no enlargement. Immediately after the passage of the Dingley Act in 1897, a large list of articles rose in price precipitously. Moreover, just so far as higher money wages for the same work, or the same money wages for a reduced number of hours, have been granted without a corresponding increase in the efficiency of the labor, the expenses of producing goods in general—and consequently prices—have risen. But, without doubt, one of the most important factors in raising prices—directly and indirectly—has been the increased price of food due to the changing conditions of agriculture. This most influential cause of higher prices is one of the "other things" which has been at work quite independent of the quantity of new gold. Moreover, the indirect effect of high prices of food produces the most serious practical problem. It wipes out all the gain of previous increases of wages, and drives laborers to repeat their demands for higher pay, thus working again to increase expenses of production. It is not too much to say that the gains of industry, shown by the fall in prices, as they stood about 1890 have been lost to us by the high tariffs of 1897 and the wastes of bad farming and the recent high costs of agriculture.

Our analysis would be inadequate, however, if we stopped here with our examination of expenses of production. The really practical problem is still before us in trying to analyze the forces at work fixing prices in that vague and dangerous margin between actual expenses of production and the prices in fact paid by the consumer. It is in this margin that we find in operation the "other things" mentioned in Part I, b, 3), 4), and 5). On these points I must necessarily be brief.

The whole *raison d'être* of monopolistic combinations is to control prices, and prevent active competition. As every economist knows, in the conditions under which many industries are today organized, expenses of production have no direct relation to prices. In such conditions, there is a field in which the policy of charging "what the traffic will bear" prevails; and this includes industries that are not public utilities.

Furthermore, Part I, b, 4), we must face the fact of increasing riches not only in this country, but all over the world. New wealth makes a liberal spender. The retail dealer finding his expenses increasing and—even when they are not—tries the experiment of charging his richer customers an increasing price. The newly rich pay and do not feel it. But what can the poorer unorganized buyer do when retail prices are raised? What can he do if his meat bill, or his plumbing-repairs bill, rises enormously? The extravagance of the rich has increased the cost of traveling, the rates at hotels, the fees, the luxury of steamships and automobiles, the consumption of fruits and vegetables out of season once never thought of, and has generally raised the standard of expenditure. Those of smaller income find they also must pay the higher prices. Thus we have reached a point where we have to pay almost whatever anyone asks. Organized buyers are the only offset to organized sellers.

Moreover, rising prices due to high expenses of production, or to combinations of sellers, present a paradise for speculation (Part I, b, 5)). A movement upward based on facts can be easily converted into a further rise based only on speculative manipulation. A rise of prices which brings large profits to a combination, thus directly affects earnings and gives especial opportunity to speculation in the securities of industrials. Hence, the field of speculation spreads from commodities (Part I) to securities (Part II). The facts as to the movement of prices of securities are well shown in Brookmire's Economic Charts since 1885; and, while the presence of gold serves as a fund of lawful money in reserves, the spread of speculation has gone on seemingly unaffected by the new supplies of gold. That is, speculative conditions may arise and disappear antecedent to and seemingly independent of the gold supplies.